

SLC19A1 Blocking Peptide (Center)
Synthetic peptide
Catalog # BP20133c**Specification**

SLC19A1 Blocking Peptide (Center) - Product Information

Primary Accession [P41440](#)
Other Accession [NP_919231.1](#)

SLC19A1 Blocking Peptide (Center) - Additional Information

Gene ID 6573

Other Names

Folate transporter 1, FOLT, Intestinal folate carrier 1, IFC-1, Placental folate transporter, Reduced folate carrier protein, RFC, Solute carrier family 19 member 1, SLC19A1, FLOT1, RFC1

Target/Specificity

The synthetic peptide sequence is selected from aa 206-218 of HUMAN SLC19A1

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

SLC19A1 Blocking Peptide (Center) - Protein Information

Name SLC19A1 ([HGNC:10937](#))

Function

Antiporter that mediates the import of reduced folates or a subset of cyclic dinucleotides, driven by the export of organic anions (PubMed: [7826387](http://www.uniprot.org/citations/7826387) target="_blank">7826387, PubMed: [9041240](http://www.uniprot.org/citations/9041240) target="_blank">9041240, PubMed: [10787414](http://www.uniprot.org/citations/10787414) target="_blank">10787414, PubMed: [15337749](http://www.uniprot.org/citations/15337749) target="_blank">15337749, PubMed: [16115875](http://www.uniprot.org/citations/16115875) target="_blank">16115875, PubMed: [22554803](http://www.uniprot.org/citations/22554803) target="_blank">22554803, PubMed: [31511694](http://www.uniprot.org/citations/31511694) target="_blank">31511694, PubMed: [31126740](http://www.uniprot.org/citations/31126740) target="_blank">31126740, PubMed: [32276275](http://www.uniprot.org/citations/32276275) target="_blank">32276275). Mechanistically, acts as a secondary active transporter, which exports intracellular organic anions down their concentration gradients to facilitate the uptake of its substrates (PubMed: [22554803](http://www.uniprot.org/citations/22554803))

target="_blank">22554803, PubMed:31511694, PubMed:31126740). Has high affinity for N5-methyltetrahydrofolate, the predominant circulating form of folate (PubMed:10787414, PubMed:14609557, PubMed:22554803). Also able to mediate the import of antifolate drug methotrexate (PubMed:7615551, PubMed:7641195, PubMed:9767079, PubMed:22554803). Also acts as an importer of immunoreactive cyclic dinucleotides, such as cyclic GMP-AMP (2'-3'-cGAMP), an immune messenger produced in response to DNA virus in the cytosol, and its linkage isomer 3'-3'-cGAMP, thus playing a role in triggering larger immune responses (PubMed:31511694, PubMed:31126740). 5-amino-4-imidazolecarboxamide riboside (AICAR), when phosphorylated to AICAR monophosphate, can serve as an organic anion for antiporter activity (PubMed:22554803).

Cellular Location

Cell membrane; Multi-pass membrane protein. Apical cell membrane; Multi-pass membrane protein. Basolateral cell membrane; Multi-pass membrane protein

Tissue Location

Placenta, liver, and to a much smaller extent, in lung.

SLC19A1 Blocking Peptide (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

SLC19A1 Blocking Peptide (Center) - Images

SLC19A1 Blocking Peptide (Center) - Background

Transport of folate compounds into mammalian cells can occur via receptor-mediated (see MIM 136430) or carrier-mediated mechanisms. A functional coordination between these 2 mechanisms has been proposed to be the method of folate uptake in certain cell types. Methotrexate (MTX) is an antifolate chemotherapeutic agent that is actively transported by the carrier-mediated uptake system. RFC1 plays a role in maintaining intracellular concentrations of folate.

SLC19A1 Blocking Peptide (Center) - References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
Locke, A.E., et al. Genet. Epidemiol. 34(6):613-623(2010)
Adjei, A.A., et al. J Thorac Oncol 5(9):1346-1353(2010)
O'Byrne, M.R., et al. Birth Defects Res. Part A Clin. Mol. Teratol. 88(8):689-694(2010)
Tsunoda, A., et al. Ann. Oncol. (2010) In press :